

What the Critics are saying about Velodyne Products:

"The SPL-800 subwoofer is a mind-blower. This dinky little sub has got to give the most slam per cubic foot I've encountered."

-Daniel Kumin
Sound & Vision, April 2002

"In general, the Velodyne could play slightly louder, and often cleaner, than the Sunfire."

-D.B. Keele Jr.
Audio, June 1998

"How do they get this kind of bass out of such a tiny box? Deep, tight, tuneful and loud enough to rattle pictures on the wall - this is serious subwoofing."

-Robert Deutsch
Stereophile Guide to Home Theater, September 1998

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P/N 63-DEC08 Rev C 13JUN2002
(Preliminary)

DECO Home Theater Speaker System



Owner's Manual

Velodyne®

***Innovative Technology,
Unequaled Performance!***

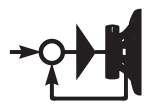
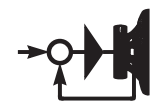
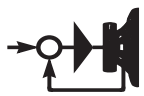


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NOTES



WARRANTY STATEMENT

Velodyne Acoustics, Inc.
345 Digital Drive
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Phone (408) 436-7270
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LIMITED WARRANTY

VELODYNE ACOUSTICS, Inc. ("VELODYNE") warrants all powered subwoofers for a period of two years, and full range/satellite speakers for a period of five years. All VELODYNE products have a warranty from the date of purchase against defects in materials and workmanship subject to the following conditions:

1. VELODYNE is not responsible for defects which result from the use of an amplifier or controller other than the one originally supplied with the unit (subwoofers) or defects which result from modifications or repairs made to any component of the system by anyone other than a VELODYNE factory authorized service representative.
2. This warranty is void if any repairs or service covered by the terms of this warranty are made to any component of the system by anyone other than a VELODYNE factory authorized service representative.
3. VELODYNE is not responsible for damage caused by accidents, abuse, misuse, natural or personal disaster or unauthorized modification. The VELODYNE products are not intended for professional or commercial use and VELODYNE is not responsible for damage resulting from such use.
4. The VELODYNE product warranty is limited to units that are purchased from authorized VELODYNE dealers and finalized within authorized dealer locations.
5. This warranty is nontransferable under any condition.

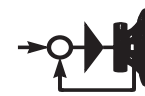
TO OBTAIN SERVICE

Information regarding service may be obtained from the dealer from whom you purchased the unit, or by contacting Velodyne (address and telephone number shown above). Warranty service must be performed by a Velodyne factory authorized service representative within the warranty period set forth in the warranty statement. If Velodyne determines the unit to be defective, Velodyne will, at Velodyne's option, repair or replace the product at no charge if the product is forwarded prepaid to a factory authorized service representative. Keep original receipt. Products forwarded to a factory authorized service representative should be shipped securely and properly packaged, insured, and freight prepaid. Use of original packaging materials is highly recommended. Online registration is not required to validate warranty, but is recommended. Registration provides us with purchase date & dealer information to assist us when validating your warranty for covered repairs.

Serial Number _____

Register.....ONLINE

**It's faster....and easier
Website: www.velodyne.com**



IMPORTANT SAFETY INSTRUCTIONS

CAUTION

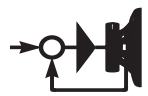


Please do not attempt to open or disassemble cabinet. There are no user serviceable parts inside.



Safety First

1. Read Instructions. All safety and operating instructions should be read before the speaker is operated.
2. Retain instructions. The safety and operating instructions should be retained for future reference.
3. Heed Warnings. All warnings on the speakers and in the operating instructions should be adhered to.
4. Follow instructions. For optimum performance, all operating and use instructions should be followed.
5. Water and moisture. The speakers should not be used near water. For example, near bathtub, washbowl, sink, laundry tub, pool, outdoors, or in an extremely damp environment.
6. Stands. If stands are used, they should be sturdy enough to prevent accidental tipping, which would result in damage to the speaker.
7. Wall or ceiling mounting. The speaker should be mounted to a wall or ceiling using hardware designed to support the weight of the speaker, or damage may result. Consult your dealer for specific recommendations.
8. Heat. The speaker should be situated away from any direct heat sources such as radiators, stoves, or any other appliances that produce heat.
9. Cleaning. The speaker should be cleaned only with a damp cloth. Harsh abrasives or cleaning solutions may damage the finish and should not be used.
10. Foreign object or liquid entry. Care should be taken so that objects or liquids do not fall onto any part of the speaker.
11. Damage requiring service. The speaker should be serviced only by a qualified technician when:
 - a. Objects have fallen or liquid has been spilled into the speaker.
 - b. The speaker has been damaged by exposure to rain or severe moisture.
 - c. The speaker does not appear to operate normally or exhibits a marked change in performance.
 - d. The speaker has been dropped, or the enclosure is damaged.
12. Servicing. The user should never attempt to service the speaker. All servicing should be referred to a qualified service technician or authorized service facility.



CONGRATULATIONS

Congratulations on your purchase of the Velodyne DECO Home Theater System. You have purchased a high quality set of precision crafted speakers and a high performance 8" subwoofer which will enhance your home theater listening pleasure. This manual provides an overview of the product, details the performance characteristics of the DECO Home Theater System, and describes how to configure and install the system. This system is engineered to reproduce the surround formats used in today's home theaters including *Dolby Digital 5.1®, Dolby Pro-Logic®, Dolby Pro-Logic® II and DTS®.

Please take a few moments to read the entire manual to ensure you get the maximum performance out of your system.

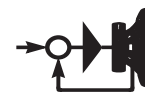
DECO HOME THEATER SYSTEM OVERVIEW

The DECO Home Theater System consists of five identical satellite speakers and an 8" Class D 600 watt amplified subwoofer. The satellite speakers are a two-way design with a single 4" woofer and a 1" silk dome ferrofluid cooled tweeter. The satellite drivers are magnetically shielded to reduce the possibility of their magnets interfering with the colors produced by your television. The enclosure is designed with the aid of the latest computer modeling programs and is molded from a reinforced high-density non-resonant polypropylene. The satellite speakers include a 1/4-20 threaded insert and a key-hole slot for various wall-mounting options. The DECO Satellites are designed to integrate flawlessly with the DECO 8 subwoofer.

As you carefully unpack the system, you will find the following items:

- a) 5 ea. DECO Satellite speakers
- b) 1 ea. DECO 8" Subwoofer
- c) 20 ea. Small Rubber feet
10 ea. Large Rubber feet
- d) 1 ea. 16' RCA cable
- e) 1 ea. Owner's Manual

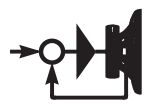
*Dolby Digital, Dolby Pro Logic and Dolby Pro Logic II are trademarks of Dolby Laboratories Licensing Corporation. DTS is a registered trademark of DTS Technology.



SPECIFICATIONS FOR THE DECO 8 SUBWOOFER

Woofers:	8" High Excursion, forward firing non-shielded driver with a 6.5" piston diameter
High Pass Crossover:	80 Hz (6 dB/octave)
Low Pass Crossover:	40 Hz to 120 Hz (12 dB/octave - initial, 48 dB/octave - ultimate)
Phase:	Switchable from 0° to 180°
Frequency Response:	28 Hz to 120 Hz (+/-3 dB)
Amplifier Power:	Class D Switching (with Patented energy recovery circuit)
	1200 Watt Dynamic Power 600 Watts RMS Power
Magnetic Structure:	12.75 lbs [5.8kg]
Voice Coil:	2.5" diameter Ultra-Hi-temp with inner/outer dual layered copper wire, CNC wound on glass fiber composite former, bonded with high temperature polyimide resin (proprietary Velodyne design)
Inputs:	Line Level - Gold Plated RCA
Outputs:	Line Level - Gold Plated RCA (80 Hz High Pass)
Warranty:	Two Years
Enclosure Dimensions (H,W,D):	11.25" x 11.0" x 11.75"
Weight (ea., unpacked):	38 lbs. [17.3kg]

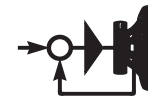
Specifications are those in effect at the time of printing. Velodyne Acoustics, Inc. reserves the right to change specifications or appearance at anytime without notice.



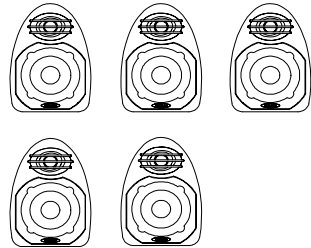
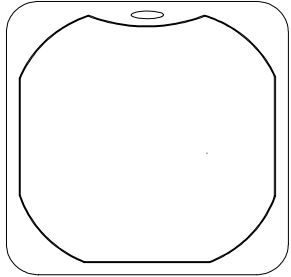
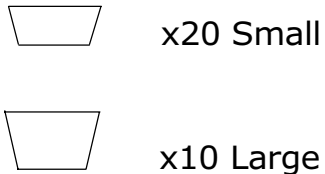
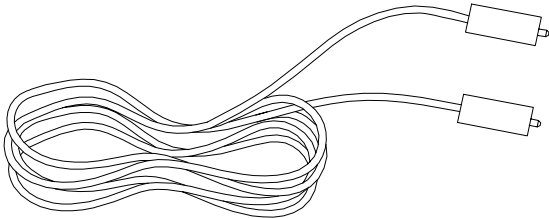
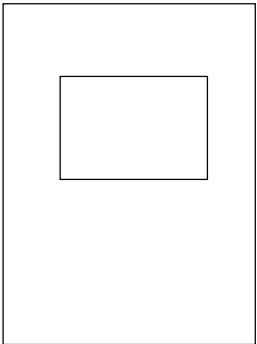
SPECIFICATIONS FOR THE DECO SATELLITES

- Woofers:** 4" Magnetically shielded woofer 3.5" piston diameter with cast aluminum basket, poly coated fiber cone and rubber surround
- Tweeter:** 1" Silk dome tweeter .95" piston diameter with shielded neodymium magnet and ferrofluid cooling
- Crossover:** 18 dB/octave @ 2500 Hz
- Sensitivity:** 88 dB for 2.83 volts @ 1 meter
- Impedance:** 4 ohm nominal*
*Compatible with most 4/6/8 ohm receivers and amplifiers. Check the owner's manual supplied with your receiver for more information.
- Protection:** Automatic resetting solid state "muting" device
- Frequency Response:** 110 Hz to 20 kHz (+/-3 dB)
- Recommend Amplifier Power:** 25 watts to 150 watts
- Inputs:** Gold Plated Binding Posts (Accepts bare wire or banana plugs)
- Warranty:** Five years
- Enclosure Dimensions (H,W,D):** 8.0" x 5.5" x 6.0"
- Weight (ea., unpacked):** 4.6 lbs [2.1kg]

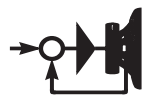
Specifications are those in effect at the time of printing. Velodyne Acoustics, Inc. reserves the right to change specifications or appearance at anytime without notice.



The DECO 8 Home Theater System contains the following items:

<p>a) 5 ea. DECO Satellites</p> 	<p>b) 1 ea. DECO 8 Subwoofer</p> 
<p>c) 30 ea. Rubber Feet</p> 	<p>d) 1 ea. 16 ft. RCA Cable</p> 
<p>e) 1 ea. Owner's Manual</p> 	

Note: After you unpack the DECO Home Theater System, locate the serial number on the back of one of the speakers, record it on page 20 of this manual and register on-line on our website at www.velodyne.com.



DECO SATELLITES

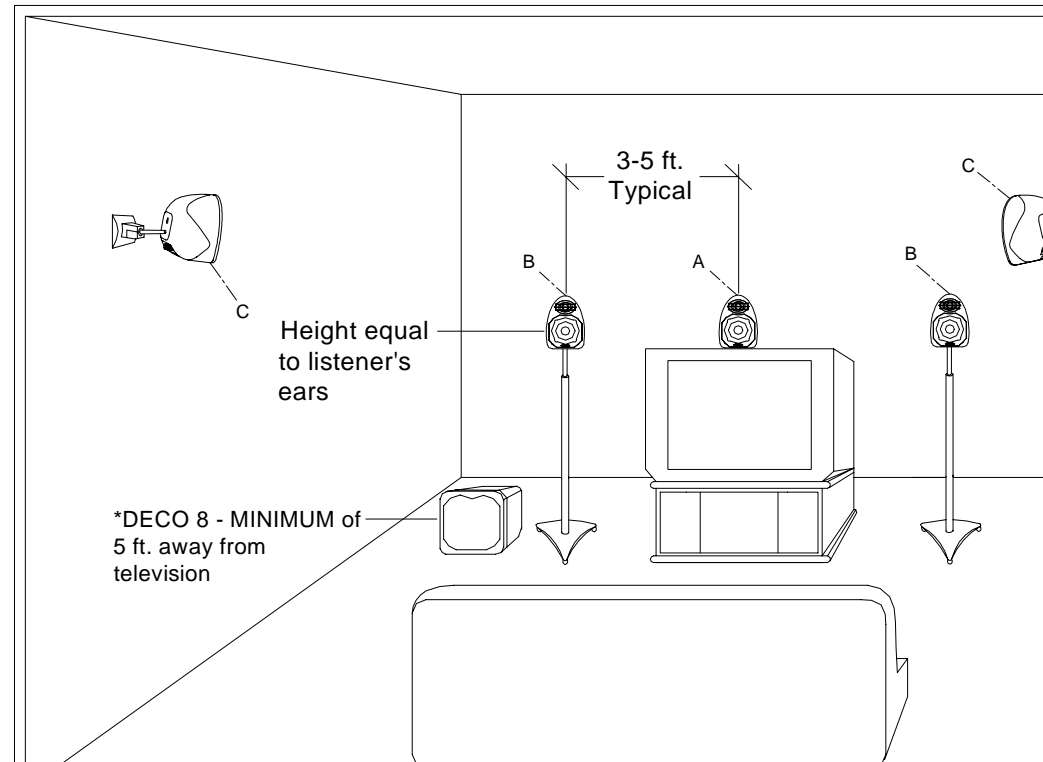
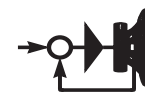


Figure 1. Typical DECO Home Theater Satellite and Subwoofer Configuration (*Velodyne recommends a **minimum** of five feet between television and your DECO 8 Subwoofer)

POSITIONING THE DECO SATELLITE SPEAKERS

The location of the Velodyne DECO Satellite speakers significantly affects the sound of the home theater system. We recommend you experiment with a few different placement options until you find the most satisfying location. The room will have a significant effect on the sound of the DECO Home Theater System. For example, a room with no carpet and minimal upholstered furniture will tend to sound bright and lively. Rooms with heavy carpeting, plush furniture and drapery, will cause the sound to be softer and slightly subdued.

Velodyne recommends positioning the DECO Satellites similar to the configuration illustrated in Figure 1. However, depending on the characteristics of your room or the configuration of your room, you may want to alter the location of the satellites from what is illustrated in Figure 1. Once you have positioned the front left, front right, rear left and rear right satellites, then you need to position the center channel and subwoofer. In most applications the center channel will be positioned above or below the monitor or screen. Velodyne has provided two sizes of rubber feet to accommodate your placement of the center channel (see Figure 2 on the next page).



The following is a simple troubleshooting guide to assist you:

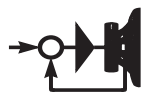
- 1) Verify that the unit is plugged in and the power outlet is active.
- 2) Is the master power switch in the "ON" position?
- 3) Is the power "AUTO ON/OFF" switch on the back of the subwoofer set to the proper position? Note: the sensitivity of the signal sensing circuit can be altered by your input signal connections. To increase sensitivity, use a "Y" connector to supply both L&R line level inputs. Also, ground loops with other equipment may place 60 Hz power line hum on the inputs and prevent the unit from shutting down properly. Check to make sure all equipment in your system uses polarized power plugs that can only be inserted into power outlets one way (large terminal is to neutral of house wiring).
- 4) Is the subwoofer receiving an input signal from the source (receiver or processor functioning normally, good cable and connection quality)?
- 5) Are all volume controls in system properly set?
- 6) If the unit has been running at high levels for an extended period of time, one of the protection circuits may be engaged.

If the thermal or undervoltage protection circuitry is active, the unit may cycle "on" and "off" until operating parameters return to normal. Under more serious conditions, the unit may shut off completely. If this happens, turn off the master switch for a few minutes and allow the amplifier to cool. If normal operation does not resume after cooling, check the power and signal connections before requesting service.

The following conditions require service by a qualified technician:

- 1) The power cord has become damaged.
- 2) The unit does not appear to operate normally or exhibits a marked change in performance.
- 3) The unit has been exposed to water.
- 4) Some part of the cabinet or amplifier is physically damaged.

Thank you for purchasing this Velodyne product. We sincerely hope this new DECO Home Theater System brings you many years of listening pleasure!



TROUBLESHOOTING THE DECO 8 SUBWOOFER

The DECO 8 Subwoofer has been designed by innovative, dedicated engineers at Velodyne. If you should experience a problem with the operation of the subwoofer, contact the dealer where you purchased this system or a Velodyne customer service representative.

Protection Circuits

The subwoofer is equipped with special protection circuitry to provide maximum performance with the greatest reliability.

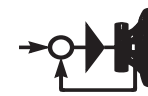
The subwoofer is protected against:

- 1) Overdriving the speaker or amplifier (DDCS-Dynamic Driver Control System and Anti-clipping)
- 2) Overheating the amplifier (thermal protection)
- 3) Excessive drop in power line voltage (undervoltage protection)

The "DDC" Protection circuit #1 continuously monitors the input signal and the demands placed on the subwoofer. This circuit automatically functions to protect the driver or amplifier from being overdriven and producing large amounts of distortion. This circuit is not audible while in operation and the level of protection is completely automatic.

Protection circuit #2 will shut down the amplifier if it overheats (i.e. some extreme conditions, such as sustained high output levels). No sound will be produced until the amplifier cools to a normal "safe" temperature. If the subwoofer should shut down, reduce the volume setting or turn the unit master power switch to the "OFF" position for a few minutes. This will allow the amplifier unit to cool down. When the amplifier cools down, you may turn the master power switch back on (if turned off) and normal operation should resume. Note: switching the master power switch off is optional, but will speed cooling of the amplifier and the return to normal operation.

Protection circuit #3 will shut the amplifier off if your power line voltage drops to extremely low levels. Insufficient power line voltage will reduce the power output capability of the amplifier. This may happen if you have too many devices plugged into the same outlet or circuit, or in high demand conditions such as summer months while air conditioners are running. The power amplifier built into this unit is capable of producing extremely high output power levels if the rated power line voltage (117 VAC) is stable. Consult your dealer or an electrician if uncertain about the condition of your home electrical wiring.



Center Channel Satellite Speaker

The center channel speaker (see Figure 1 item A) should be located directly above or below your monitor or screen. It is generally best to have the height of the three front speakers be about the same as the listener's ears. Often this is not practical since the top of your monitor or screen may be higher than your ears. In this case, the center channel should be aimed down slightly or be placed below the monitor or screen and angled slightly upward (see Figure 2 below).

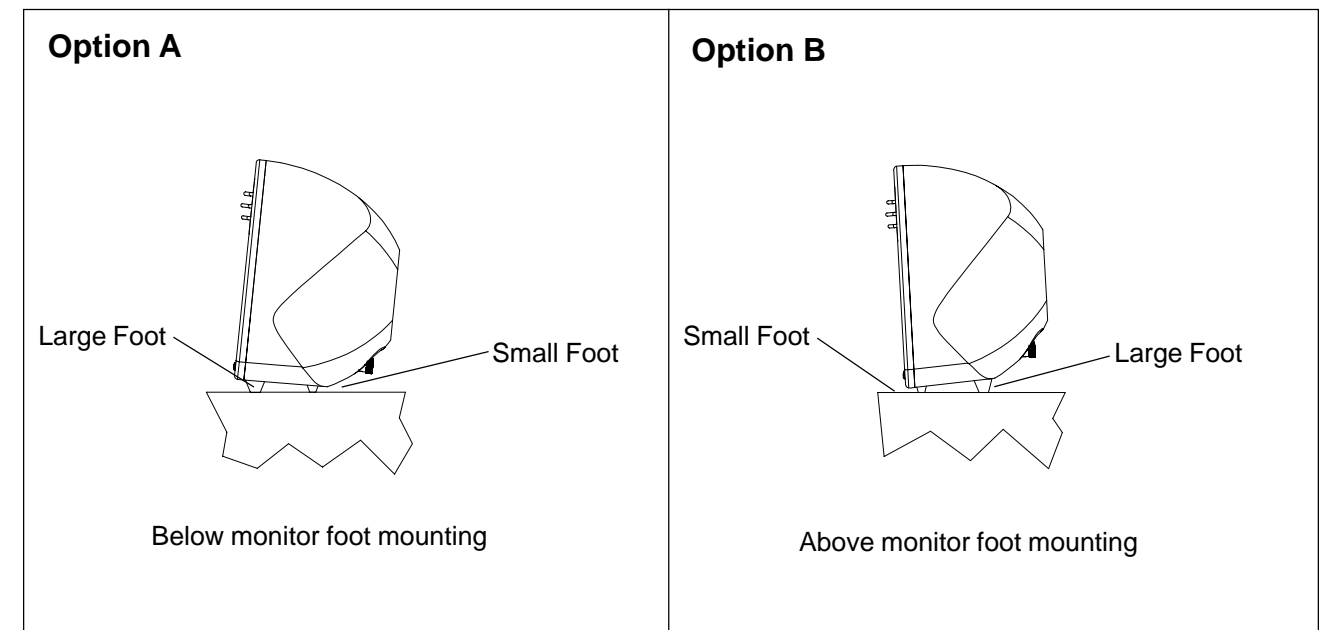
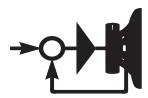


Figure 2. Center channel foot mounting options

Front Left and Right Satellite Speakers

The front left and right speakers (see Figure 1 item B on previous page) should be about six to ten feet apart as shown in Figure 1. Larger spacing is allowable, but the sound may become disassociated from the video being screened. If the speakers are widely separated, aim the speakers inward toward the center of the listening position.



Rear Left and Right Satellite Speakers

The rear left and right speakers should be placed behind, to the side and slightly above the listener's head. The rear speakers are not as placement critical as the center and front speakers. The main purpose of the rear speakers is to reproduce subtle environmental sounds. Note: If the rear speakers are placed too close to the listener, they will not provide the desired surround effect (see Figure 1 item C on page 4).

MOUNTING THE DECO SATELLITE SPEAKERS

**Note: The customer or audio installer is responsible for the selection and use of mounting hardware to ensure the proper and safe wall mounting of the speakers.

The Deco satellite speaker has been engineered with multiple integral wall mounting options. Utilizing either the 1/4-20 threaded insert on the back of the satellite cabinet or the slotted key-hole, the DECO Satellites can be wall or ceiling mounted. Depending on your particular home, there is a wide variety of mounting hardware that could be applicable to your installation. For this reason, Velodyne suggests that you seek advice from your local audio dealer or hardware store if you do not have experience with this type of installation. The two most common direct mounting methods for these speakers are either using a nail or screw to hang the speaker directly on the wall (see Figures 3A and 3B). Another option is to utilize the RST Series wall mount bracket from Omni-Mount (see Figure 3C).

When following the three recommended mounting methods, Velodyne recommends securing directly to a stud, utilizing anchors or nails of the appropriate size. To prevent damage to your DECO satellite please ensure that the length of the nail or screw used to mount the speaker does not protrude out from the wall more than 1/2 inch or damage to the speaker may result once mounted.

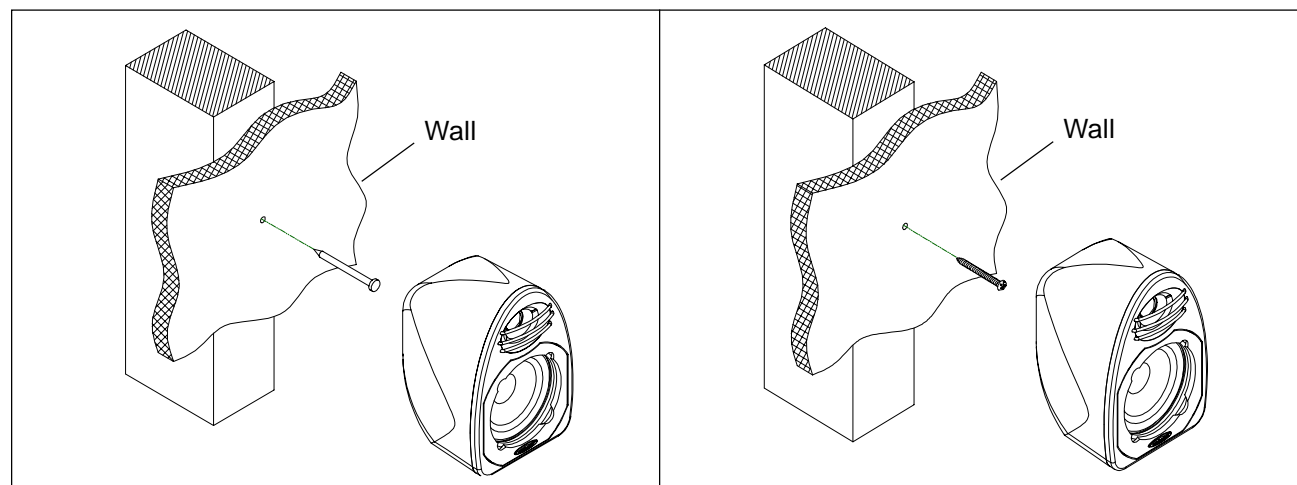
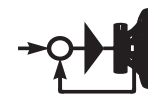


Figure 3A. Wall mounting with a nail Figure 3B. Wall mounting with a screw



CARE AND CLEANING

CARE AND CLEANING OF THE DECO HOME THEATER SYSTEM

The Velodyne subwoofer and satellite speakers do not require any regular maintenance. Normal dusting or cleaning of the surface is all that is required. Avoid any harsh detergents or chemicals when cleaning the cabinet. Abrasives, detergents, or cleaning solutions may damage the finish on the cabinet. We recommend using a damp cloth to clean the cabinet.

TROUBLESHOOTING THE DECO HOME THEATER SYSTEM

TROUBLESHOOTING THE DECO SATELLITE SPEAKERS

The DECO Satellites have an automatic solid-state protection device. This solid-state protection operates by automatically reducing the drive level to the speakers. If you notice that the speakers are getting quieter, turn the volume down for 30 seconds to allow the protection circuit to reset. Normal operation will automatically resume.

If the speakers are not working, please check the following:

- 1) Verify that all of the speakers are properly connected to the amplifier. Check polarity and cable condition. Also check the quality of the connection at the speaker terminals and at the source.
- 2) The receiver and source are powered on.
- 3) The source is running, not paused or muted.
- 4) The speaker selector switch is in the proper position.
- 5) The correct source is selected.

The following conditions require service by a qualified technician:

- 1) The enclosure has become damaged or broken.
- 2) The unit does not appear to operate normally or exhibits a marked change in performance.
- 3) The unit has been exposed to water.
- 4) The woofer or tweeter is physically damaged.

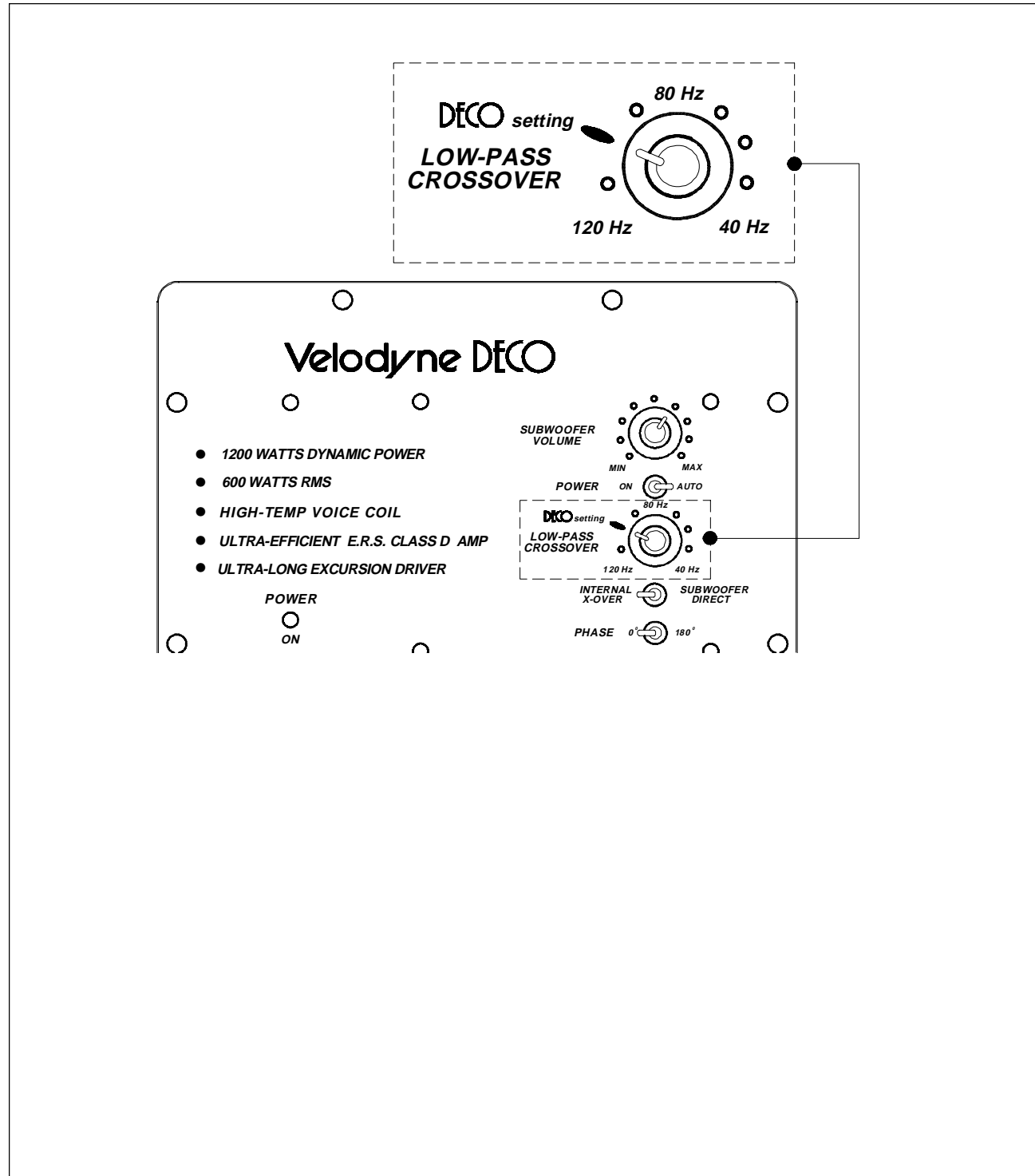
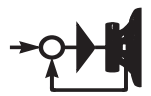


Figure 8. Suggested Knob Position for "LOW-PASS CROSSOVER" with DECO Satellites

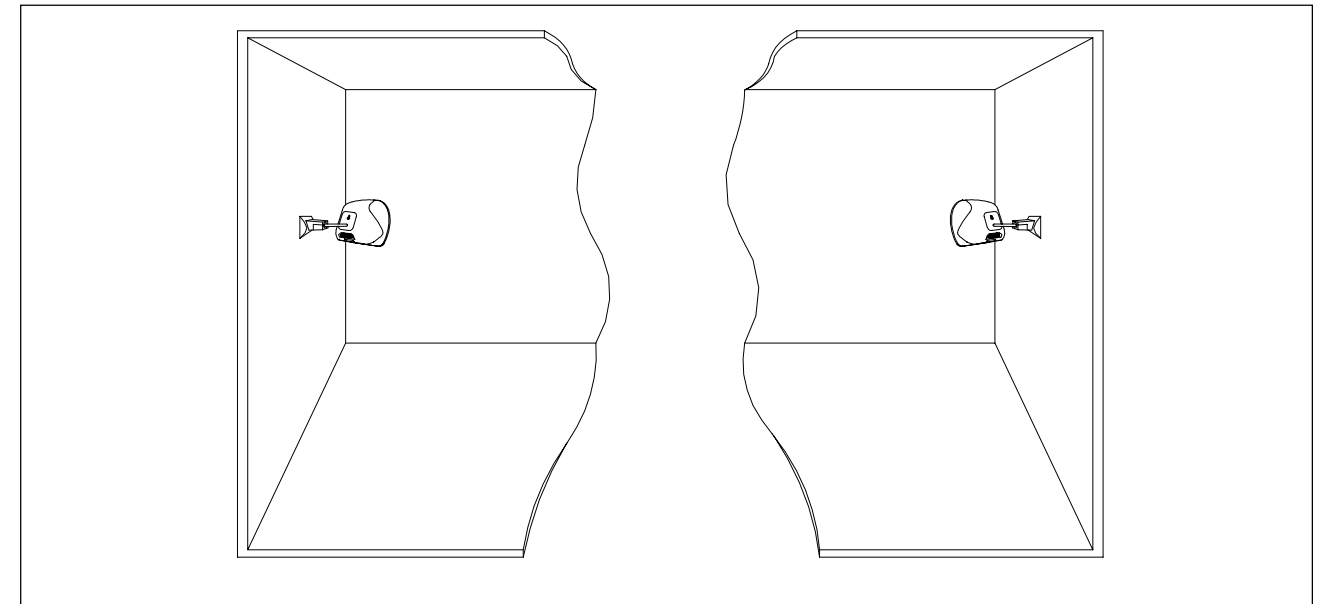
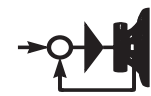


Figure 3C. Illustrates the "Omni-Mount" Wall Bracket (Model RST Series) installed into the 1/4-20 threaded insert on the back of the DECO Satellite. Contact your local audio dealer to purchase Omni-Mount products.

Another option is the speaker stand by SANUS System. The location of the 1/4-20 threaded insert on the back of the satellite will accommodate the use of the SANUS System "Euro Foundation Series" stand. Other speaker stand models may work, but Velodyne recommends the use of the "SANUS System" stand (see Figure 4).

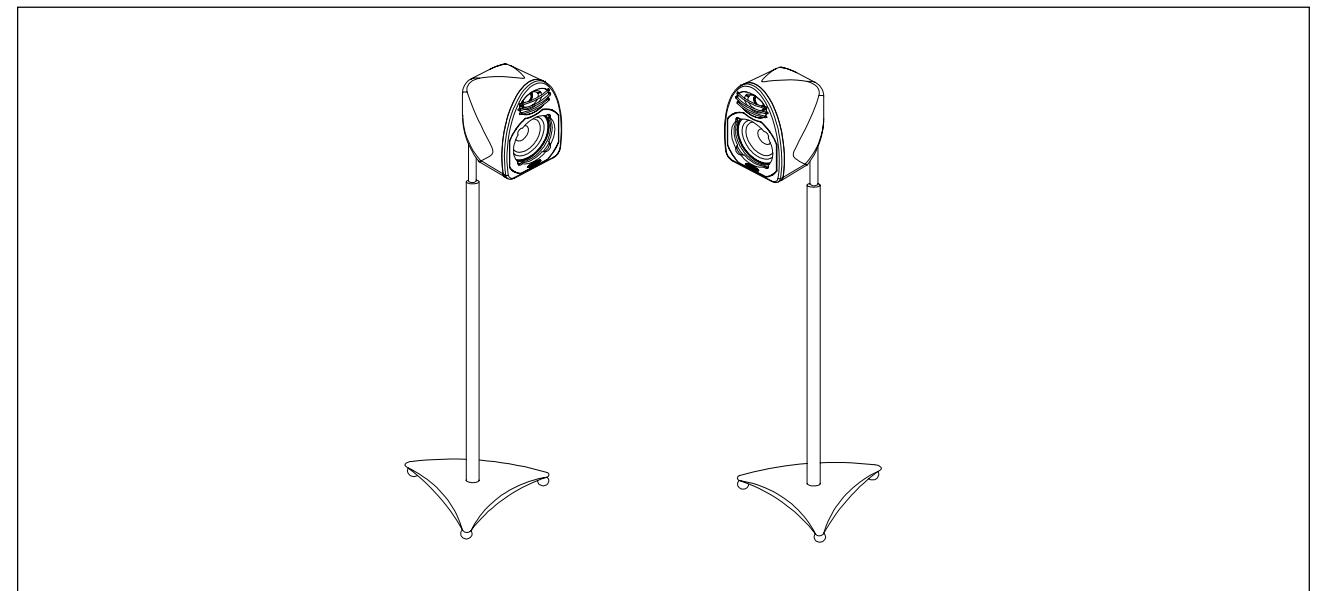
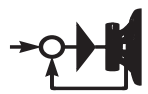


Figure 4. Illustrates the "SANUS System" speaker stand (Euro Foundation Series) with the DECO Satellite installed. Contact your local audio dealer to purchase SANUS System products.



POSITIONING THE DECO 8 SUBWOOFER

True subwoofers operate at extremely low frequencies which are primarily omnidirectional. This allows great flexibility in the placement of the subwoofer. Finding the best location in your environment will likely require some experimentation. We suggest experimenting with various locations during the setup of the DECO 8 subwoofer to find a location that suits you best when you are seated in your typical listening position. Keep in mind that frequency response and output level can be drastically influenced by placement, depending on the acoustic properties of the listening room. Typically, the optimum location for a subwoofer is tucked away in a corner of your listening room. This location will usually offer the greatest output levels and optimum low frequency extension. The worst location for a subwoofer is typically far way from any walls, and close to the center of your room. Avoid these locations when possible.

Caution! This subwoofer has electronics built in to the cabinet. Do not place the cabinet next to sources of heat such as furnace registers, radiators, etc. Do not place the unit near sources of excessive moisture, such as evaporative coolers, humidifiers, etc. The power cord should be routed in such a way that it will not be walked on, pinched, or compressed in any way that could result in damaging the insulation or wire.

The DECO 8 Subwoofer must remain in an upright position (woofer facing forward, amp rearward). Using, shipping, or otherwise storing the subwoofer in any other position for an extended period of time may result in damage not covered by warranty.

Because of the small size of the DECO 8 cabinet and the large motor structure (204 oz.), this subwoofer is **NOT** magnetically shielded to reduce the amount of stray magnetic energy emitted from the speaker. This stray magnetic field can have a negative effect on your video system when the unit is placed close to video monitors. Certain types of televisions are particularly sensitive to stray magnetic fields. If your television produces distorted colors after installing your subwoofer, simply increase the distance between your television and the DECO 8 Subwoofer. Velodyne recommends a **MINIMUM** of five feet between any video monitor and the DECO 8 Subwoofer.

The Velodyne DECO 8 subwoofer, like any high quality speaker, requires proper positioning within the listening space, to provide maximum performance. An improperly placed subwoofer may degrade the sound quality and reduce your listening pleasure.

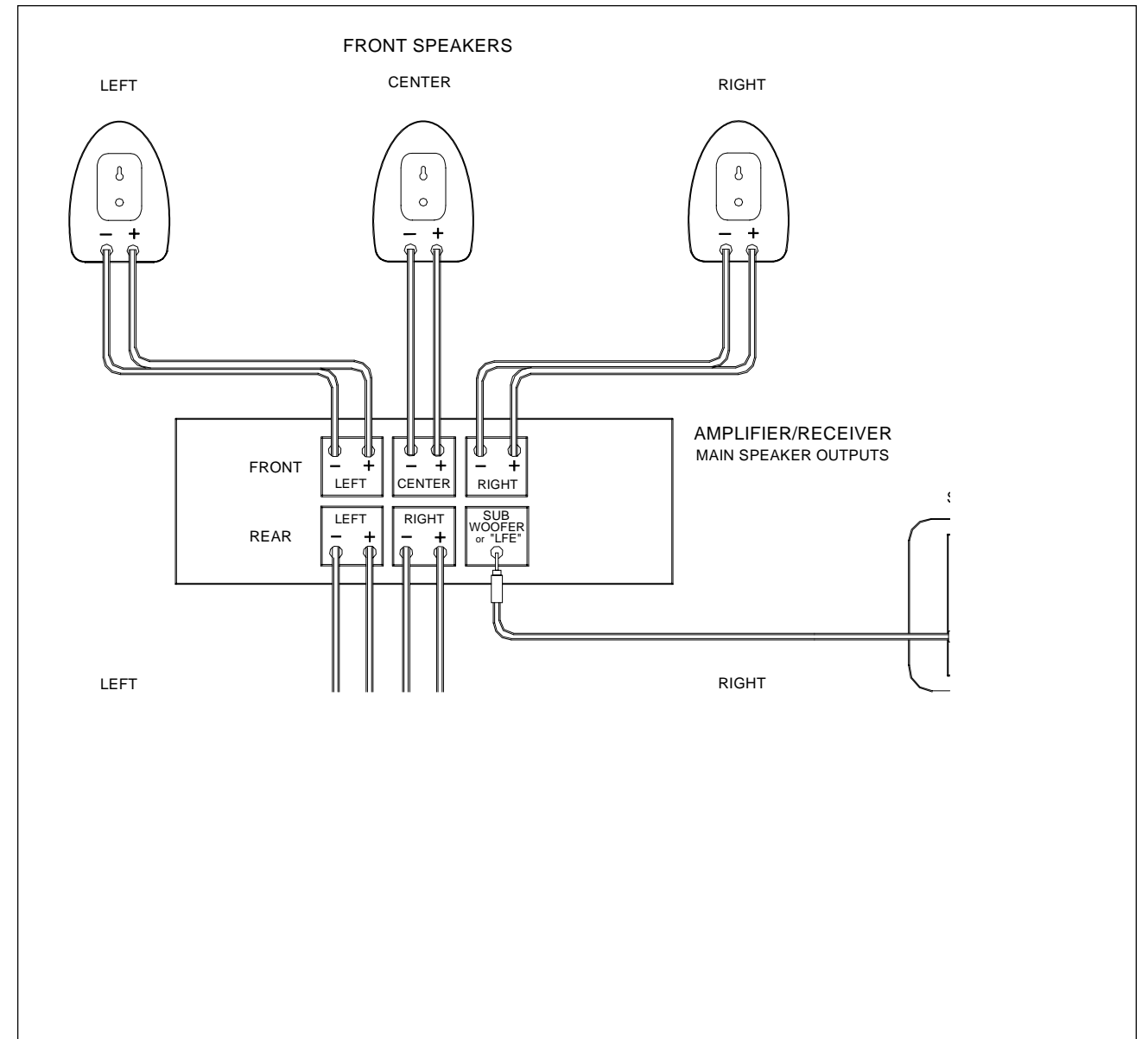
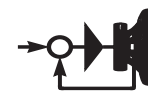
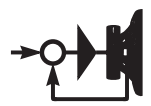


Figure 7. Wiring diagram for the DECO Home Theater System



Crossover Switch

The subwoofer direct switch will disengage the built-in crossover in the DECO 8 subwoofer and is designed to be used with a home theater receiver which has a built in crossover. Set this switch to the "SUBWOOFER DIRECT" position when you are using a home theater receiver with a subwoofer (LFE) output that has a built in crossover. If the "Subwoofer Out" or "LFE Out" in the receiver or processor offers an adjustable crossover frequency, we recommend you experiment with this setting. A crossover frequency from 100-120 Hz will work best in most installations, allowing output from the DECO subwoofer and satellite speakers to blend together seamlessly. Refer to the receiver owner's manual for instructions on adjusting its crossover frequency.

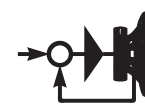
For all other installations which do not have a separate electronic crossover, we recommend you leave the switch to "INTERNAL X-OVER" and set the crossover knob to "DECO Setting" for optimum system performance (see Figure 8 page 14).

Auto/On Power Switch

With this switch in the "AUTO" position, the subwoofer can be safely left with the master power switch on continuously. The subwoofer will power up automatically when an audio signal is present. If no signal is present for approximately 10 minutes, the unit will switch to a standby mode. The subwoofer will draw very little power while in the standby mode. Leaving the master switch in the "ON" position will keep the subwoofer powered whenever the master power switch is on.

Master Power Switch

The master power switch is located on the back panel of the subwoofer. If the unit is to be left unused for an extended period of time, the master power switch should be turned off to prolong the life of the subwoofer and conserve energy.



CONNECTING THE DECO HOME THEATER SYSTEM

CONNECTING THE DECO SATELLITES

Velodyne recommends installing the DECO Satellite speakers with 16 AWG (American Wire Gauge) or larger speaker wire. Always switch off all your equipment before making any connections. Be very careful to observe polarity (see Figure 5 below) when connecting the positive (Red +) terminal on the receiver to the positive (Red +) terminal on the speaker; and the negative (Black -) terminal on the receiver to the negative (Black -) terminal on the speakers. Connecting these wires improperly will adversely affect the sound quality of the speaker system. Look carefully at the type of wire you are using. The wire you are using may be identified with a different color, printing, ridges or colored thread marks on one of the wire strands. By convention the marked (or colored) wire is connected to the positive (Red) terminals. Make sure that all of the wire strands are inserted into the terminals so that there are no loose strands. To connect the speakers, remove approximately 1/2" of insulation from the end of each wire. Twist the strands of each wire into a tight bundle, depress the terminal and insert into the hole on the side of the terminal. The DECO Satellites are designed to accept individual banana plugs. The banana plugs should be inserted into the hole on the top of the gold plated terminal (see Figure 7 page 13 for typical

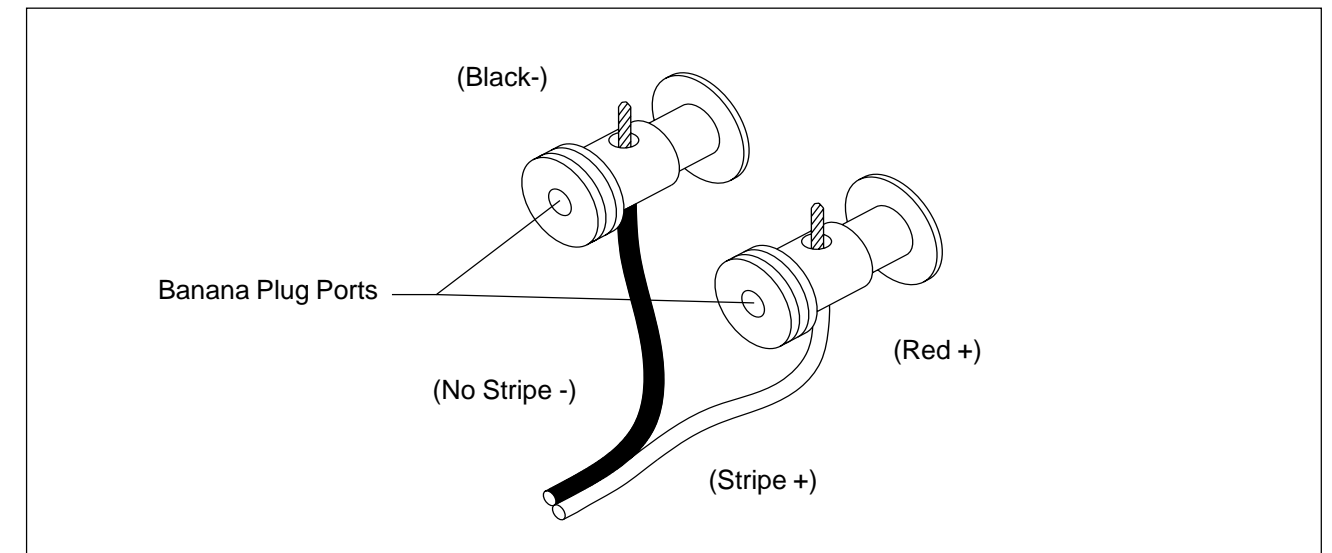
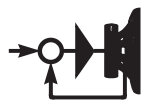


Figure 5. Wiring illustration for recommended polarity connections.



system wiring diagram).

CONNECTING/CONFIGURING THE DECO 8 SUBWOOFER

Velodyne recommends using the line level inputs to connect the DECO 8 subwoofer to a preamp, signal processor or receiver with a "SUBWOOFER OUTPUT" for optimum performance in most home theater systems.

Velodyne has provided a high quality 16' RCA Subwoofer cable to connect the subwoofer to your receiver, as illustrated in Figure 6 below. The cable should be inserted into the RCA input labeled "LFE IN" (Low Frequency Effects) on the amplifier panel. The other end of the cable should be inserted into the "SUBWOOFER OUTPUT" on the back of your receiver (see Figure 7 page 13 for typical use of the single RCA cable).

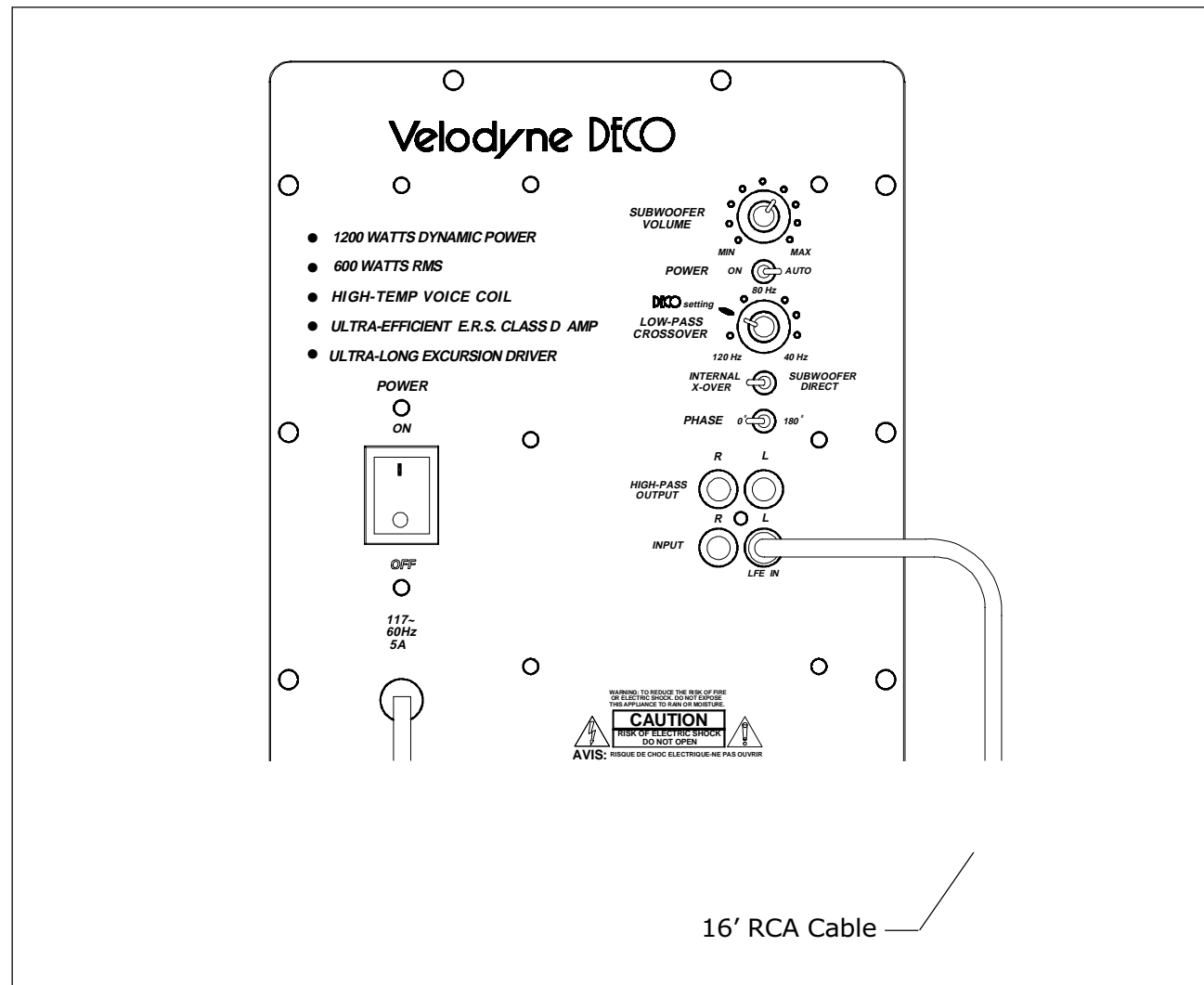
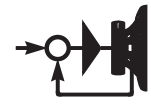


Figure 6. Diagram of RCA Cable on DECO 8 amplifier panel



Volume Control

The volume control allows you to balance the output from the subwoofer to the main speakers in the system. This control should be set to achieve a comfortable listening level of both the main speakers and the subwoofer, while listening to music. A good starting point for the volume control is at 3 or 4 dots from the "MIN" setting. The correct output level setting of the subwoofer should blend the subwoofer's output smoothly with that of the satellite speakers. It should not be set to overpower them or be inaudible. Many home theater receivers have a "Test Tone" function that will play a noise/test signal of equal level through the speakers and subwoofer output, one at a time, to aid in balancing volume. Consult your receiver owner's manual to see if this function is offered to aid in setup.

Low-Pass Crossover

The low-pass crossover control allows you to adjust the upper limit of the subwoofer's frequency response from 40 to 120 Hz. Velodyne recommends that you set the DECO 8 subwoofer to the "DECO Setting" for optimal x-over point (see Figure 8 page 14) when you are using the DECO Satellites. This setting will prove a seamless transition between the subwoofer and satellites. If you use the DECO 8 Subwoofer with another satellite speaker system, you may need to adjust your crossover to provide the proper integration. Velodyne has also provided a bypass switch on the amplifier panel, if you wish to utilize the LFE output from your home theater receiver (see "Crossover Switch" section on Page 12).

Phase Switch

The phase switch control allows you to "reverse" the phase of the subwoofer's output signal 180° to correct for a mismatch between the subwoofer and satellite speakers sound output. This could result from electrical differences in your equipment's internal wiring, external wiring of satellite speakers relative to the subwoofer, or acoustic differences resulting from room placement (distance between subwoofer and front satellites). A mismatched system will result in cancellation of some sound output between the subwoofer and satellite speakers. To adjust the phase switch, remain seated in the "listening position" while someone moves the phase switch from the 0° position to the 180° position. Listen for an audible change in low-mid frequency output. The correct position will have a greater amount of apparent low-mid frequency output.